

WHAT IS CLAIMED IS:

1. A method of forming a pot for an array of hollow fibre membranes, each fibre membrane comprising an end, the method comprising:
 - placing the ends of the fibre membranes in a mould;
 - forming a first layer of a curable resin material in a non-cured state around the ends;
 - applying a second layer of a polyurethane resin material to the first layer prior to full curing of the first layer, wherein the polyurethane resin material is chemically reactive with the curable resin material to form an adhesive bond between the first layer and the second layer, and wherein a fully cured polyurethane resin material is of a higher flexibility than a fully cured curable resin material;
 - at least partially curing the first layer and the second layer, such that a pot is formed; and
 - removing the pot from the mould.
2. The method according to claim 1, wherein the curable resin material comprises an epoxy resin.
3. The method according to claim 1, wherein the first layer comprises at least one flexibilising agent.
4. The method according to claim 1, wherein the step of forming a first layer of a curable resin material further comprises monitoring a curing process of the first layer to determine an optimal time at which to apply a second layer to the first layer.
5. The method according to claim 4, wherein the step of monitoring comprises monitoring a temperature change within the first layer to determine a state of the curing process.
6. The method according to claim 1, further comprising the step of providing a potting sleeve within the mould to receive a first layer and a second layer.
7. The method according to claim 6, wherein the potting sleeve comprises adhesion means, wherein the adhesion means assist in adhesion of at least one of the curable resin material and the polyurethane resin material to the potting sleeve.

8. The method according to claim 6, wherein a surface of the potting sleeve in contact with at least one of the curable resin material and the polyurethane resin material is roughened.

9. The method according to claim 6, wherein the potting sleeve comprises at least one protrusion formed on a surface of the potting sleeve in contact with at least one of the curable resin material and the polyurethane resin material.

10. The method according to claim 6, wherein the potting sleeve comprises at least one indentation formed on a surface of the potting sleeve in contact with at least one of the curable resin material and the polyurethane resin material.

11. An apparatus suitable for use in potting an array of hollow fibre membranes, each fibre membrane comprising an end, the apparatus comprising:

a mould for receiving the ends of the hollow fibre membranes;

means for forming a first layer of a curable resin material in a non-cured state around the ends in the mould; and

means for applying a second layer of a polyurethane resin material to the first layer prior to full curing of the first layer, wherein the polyurethane resin material is chemically reactive with the curable resin material to form an adhesive bond between the first layer and the second layer, and wherein a fully cured polyurethane resin material is of a higher flexibility than a fully cured curable resin material.

12. The apparatus according to claim 10, wherein the mould comprises separate means for flowing the curable resin material in a non-cured state and the polyurethane resin material into the mould.

13. The apparatus according to claim 11, further comprising a centrifuge and a conduit or a tube, wherein at least one of the curable resin material in a non-cured state and the polyurethane resin material are fed into the centrifuge before being flowed along the conduit or the tube into the mould.

14. The apparatus according to claim 12, wherein the centrifuge comprises separate sections for receiving the curable resin material in a non-cured state and the polyurethane resin material.

15. The apparatus according to claim 11, further comprising a potting sleeve within the mould to receive the first layer and the second layer.

16. The apparatus according to claim 15, wherein the potting sleeve comprises adhesion means, wherein the adhesion means assist in adhesion of at least one of the curable resin material and the polyurethane resin material to the potting sleeve.

17. The apparatus according to claim 15, wherein a surface of the potting sleeve in contact with at least one of the curable resin material and the polyurethane resin material is roughened.

18. The apparatus according to claim 15, wherein the potting sleeve comprises at least one protrusion formed on a surface of the potting sleeve in contact with at least one of the curable resin material and the polyurethane resin material.

19. The apparatus according to claim 15, wherein the potting sleeve comprises at least one indentation formed on a surface of the potting sleeve in contact with at least one of the curable resin material and the polyurethane resin material.

20. An apparatus suitable for use in potting an array of hollow fibre membranes, each fibre membrane comprising an end, the apparatus comprising:

a mould for receiving the ends of the hollow fibre membranes;

a potting sleeve within the mould to receive a first layer and a second layer, wherein the potting sleeve comprises at least one protrusion or indentation formed on a surface of the potting sleeve in contact with at least one of the first layer and the second layer;

a conduit or a tube, whereby a curable resin material in a non-cured state is flowed into the mould and around the ends to form the first layer;

a conduit or a tube, whereby a polyurethane resin material is flowed into the mould atop the first layer prior to full curing of the first layer to form a second layer, wherein the polyurethane resin material is chemically reactive with the curable resin material to form an adhesive bond between the first layer and the second layer, and wherein a fully cured polyurethane resin material is of a higher flexibility than a fully cured curable resin material; and

a centrifuge, wherein at least one of the curable resin material in a non-cured state and the polyurethane resin material is fed into the centrifuge before being flowed along a conduit or a tube into the mould.